The Global HD Television Industry

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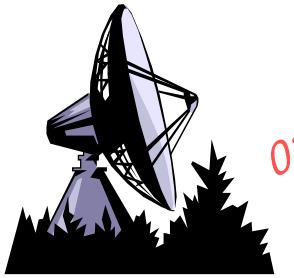
Outline

- HDTV – The players
- Television Forecasts
- Summary

HDTV Transition: The Players

Digital Broadcasting



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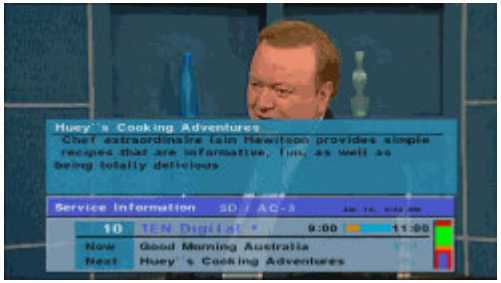
High Quality Picture and Audio
Wide Screen
Interactive

Clearer Picture

Noisy Analog Picture

Clearer Digital picture

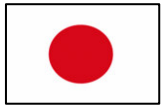
Interactive Data Services



WW Digital Broadcasting Schedule

Analog/Digital **2008**

Analog/Digital **2008~2010**

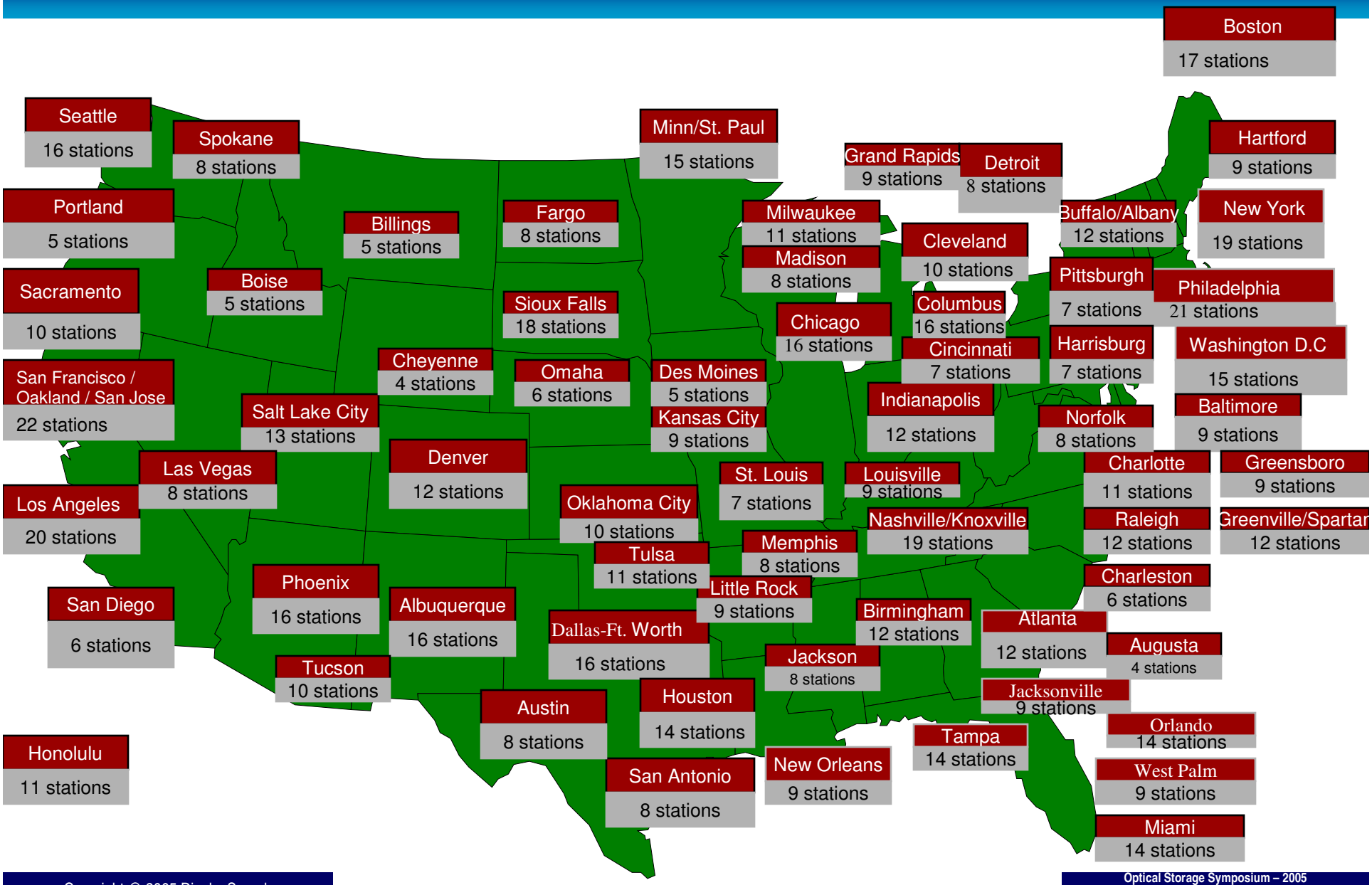


Analog/Digital **2010**

Analog/Digital **2010**

Analog/Digital **2015**

Over-the-air Broadcast Stations transmitting Digital content as of 9/21/05



Content Has Arrived – 1080i is here!

All major U.S. networks are lining up to offer HDTV: Currently, over 70% of prime time in the U.S. is HD.

U.S. networks are divided into two HDTV camps so far

1280 x 720p

1920 x 1080i

Source: * HDTV.CNET.COM: CNET Editors' Guide to High-Definition Television (http://www.cnet.com/4520-7874_1-5119938-1.html)

High-definition Blu-Ray and HD-DVD are both Full HD (1920 x 1080p), meaning the HD-TV market and consumers will benefit no matter which prevails

Next generation gaming platforms are designed for widescreen HDTVs, with XBox 360 supporting 1080i and PS3 supporting 1080p

FCC DTV Tuner Mandate – Jun. 9, 2005

New TVs must be able to tune **over-the-air** DTV signals according to the following schedule:

Screen Size	50% of All Units	100% of All Units
36” and above	July 1, 2004	July 1, 2005
25” to 35”	July 1, 2005	March 1, 2006*
13” to 24”	N/A	Dec. 31, 2006**
TV interface/receiving devices	N/A	Dec. 31, 2006**

* Advanced from July 1, 2006

** Proposed instead of July 1, 2007

*

The end of analog only TV sales may only be a little over 15 months away!

DTV Proposal by House Telecommunications Subcommittee

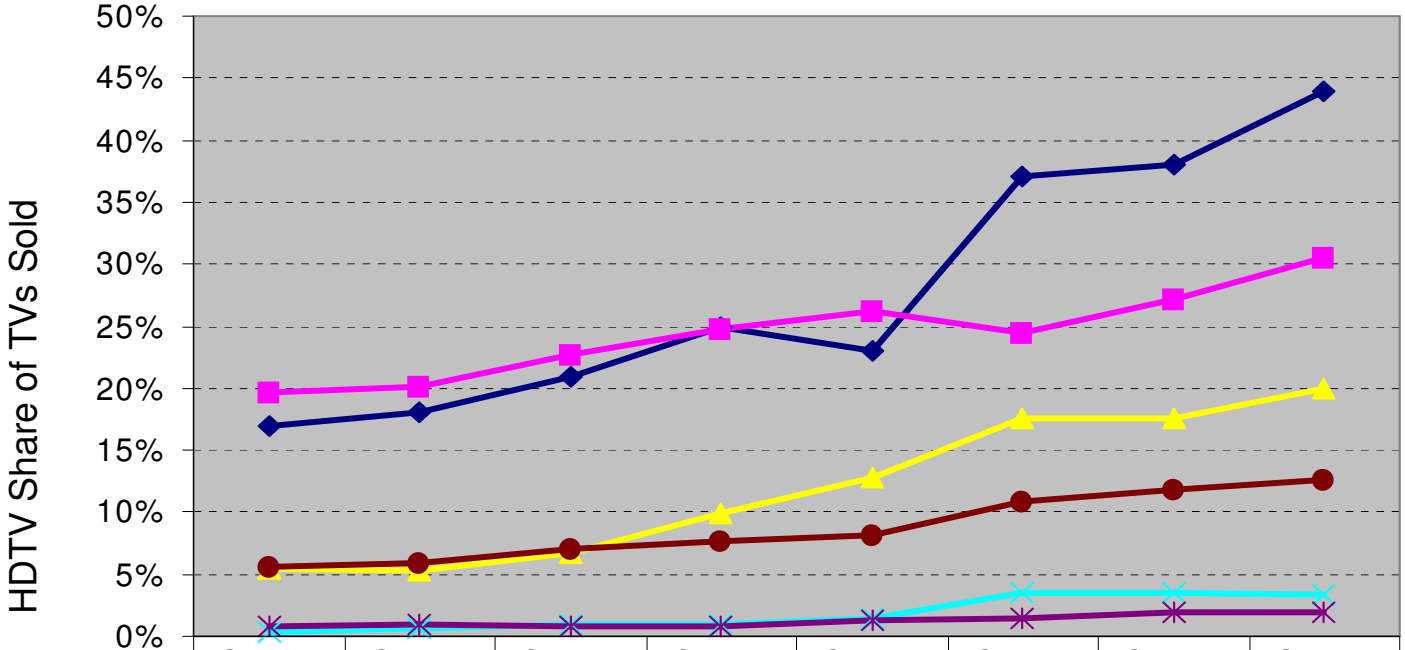
(“Staff Draft”) - May 2005

- Analog broadcasts cease on Dec. 31, 2008
- Manufacturers must label analog TVs and retailers must display signs indicating
  - “To receive broadcast programming after 12/31/2008, this [analog] TV must be attached to a digital STB or cable/satellite box.”
- Cable operators must carry the primary video signal of digital broadcasters
- FCC must educate consumers about how to receive TV signals after the turnoff
- FCC must complete digital tuner mandate by end of 2006

- Most recently, Sen. McCain (R-Ariz.),proposed that broadcasters return the analog spectrum by Jan 1, 2007, 2 years ahead of original proposals!

Quarterly HDTV Share by Region*

- **Flat panels are driving HD adoption. As a result, Japan overtook North America in quarterly HDTV penetration.**

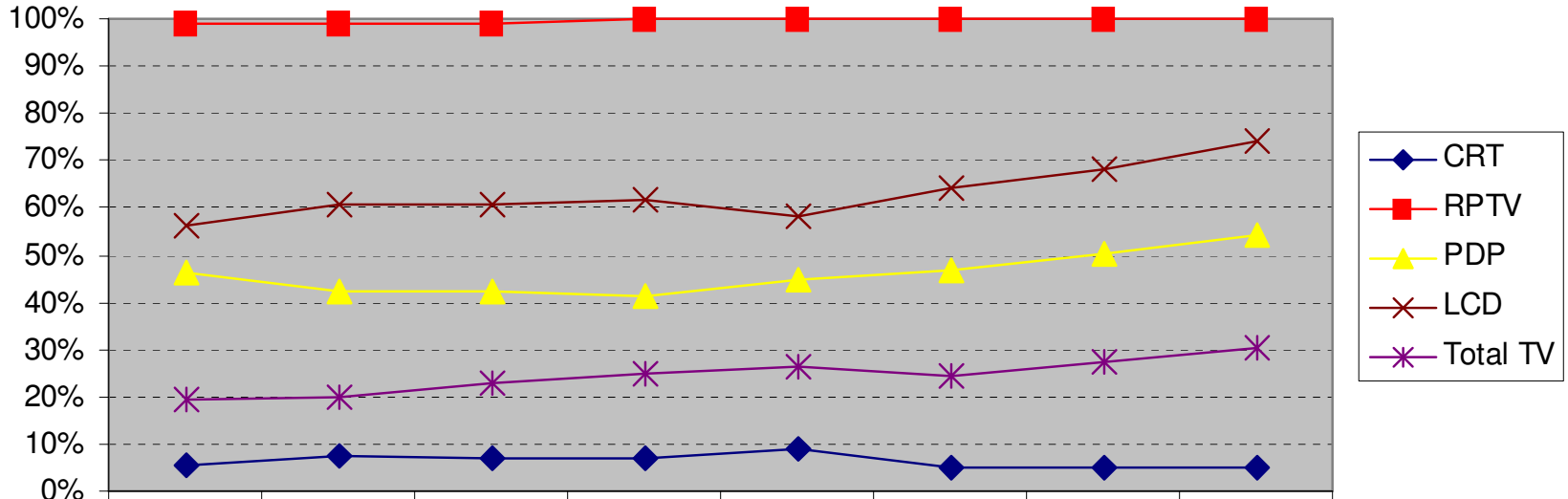


	Q1 '04	Q2 '04	Q3 '04	Q4 '04	Q1 '05	Q2 '05	Q3 '05	Q4 '05
Japan	17%	18%	21%	25%	23%	37%	38%	44%
NA	20%	20%	23%	25%	26%	24%	27%	31%
Europe	5%	5%	7%	10%	13%	18%	18%	20%
China	0%	1%	1%	1%	1%	4%	3%	3%
ROW	1%	1%	1%	1%	1%	1%	2%	2%
Total	6%	6%	7%	8%	8%	11%	12%	13%

*Q3'05 and Q4'05 are projections.

HDTV Product Penetration in North America*

- **HDTV displays continue to increase penetration. In Q2 ’05 HD LCD penetration increased to 64%, HD Plasma penetration increased to 47%.**
- **In Q4 ’05, HDTV product is expected to account for 31% of all TV’s shipped into the NA market.**



	Q1 '04	Q2 '04	Q3 '04	Q4 '04	Q1 '05	Q2 '05	Q3 '05	Q4 '05
CRT	6%	8%	7%	7%	9%	5%	5%	5%
RPTV	99%	99%	99%	100%	100%	100%	100%	100%
PDP	46%	42%	42%	41%	45%	47%	50%	54%
LCD	56%	61%	61%	62%	58%	64%	68%	74%
Total TV	20%	20%	23%	25%	26%	24%	27%	31%

* Q3’05 and Q4’05 are projections.

Retail Community has "Jumped Into" the Digital TV Business

National Accounts are showing Flat Panel + MicroDisplay assortments of 30-75+ models! PLUS weekly "circular" exposure.

Other major retail accounts are getting into the DTV business.

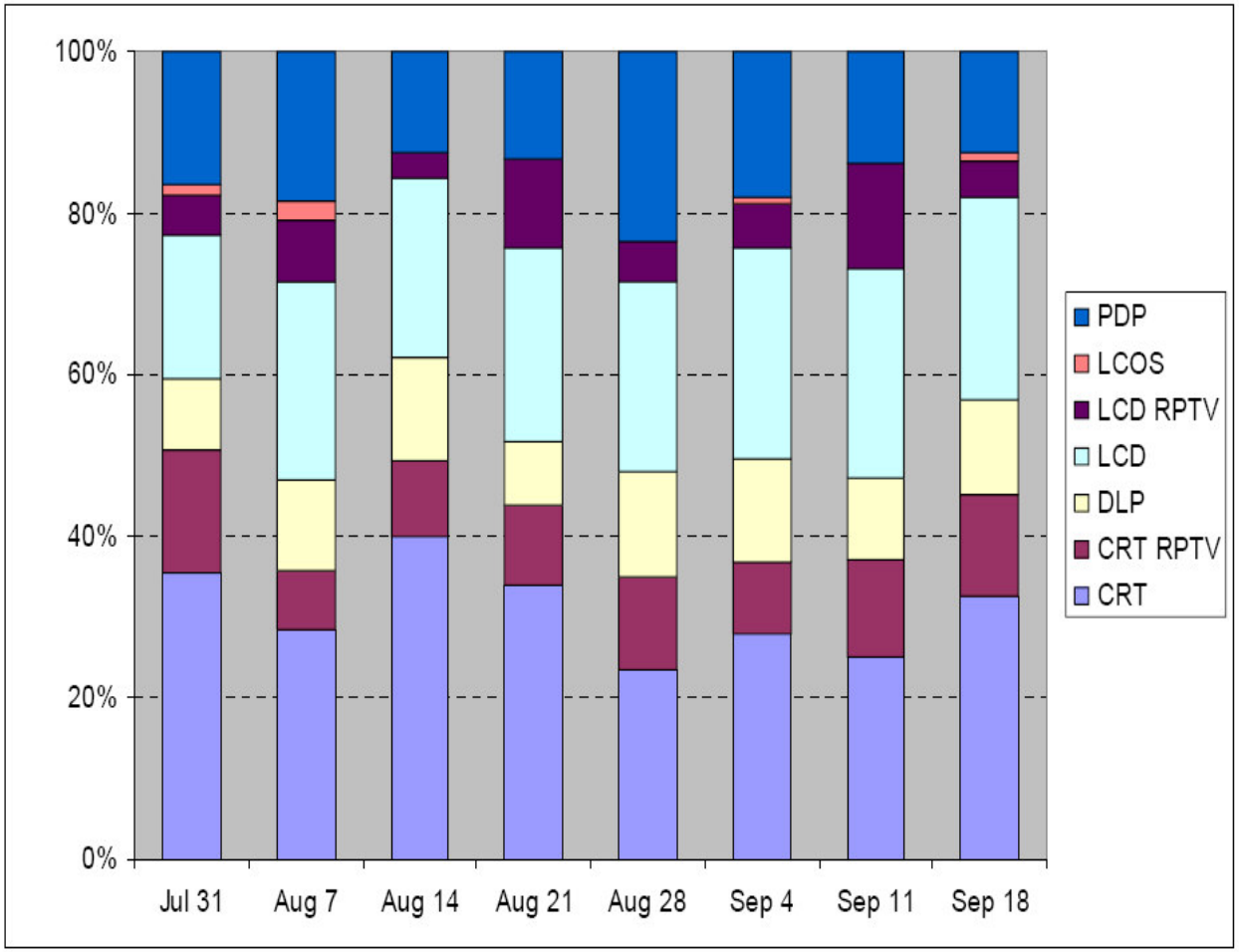
Specialty" A/V accounts have been involved for years and are still a big part of the business.

Wholesale clubs are offering increasing products in these categories as well.

Dealers shown are "representative samples" and are for illustrative purposes only

TV Circular Ad Share By Technology

Best Buy / Circuit City / Sears / CompUSA / Conn's



- Over 65% of advertised TVs on Sept 18 were HD.

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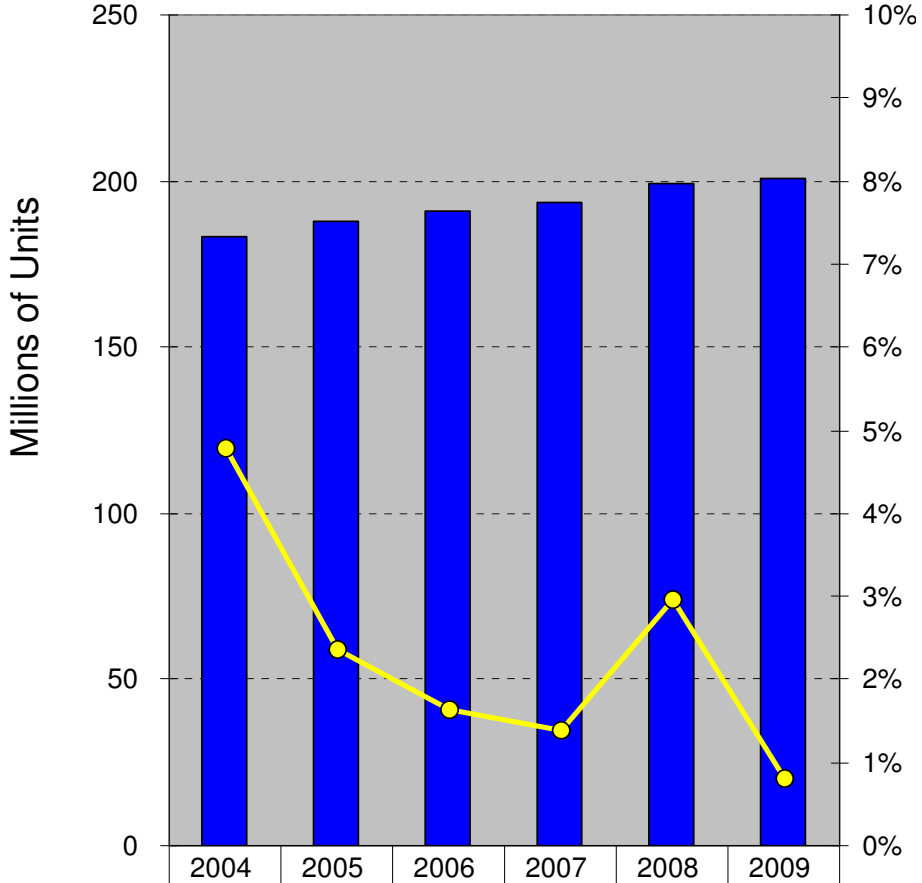
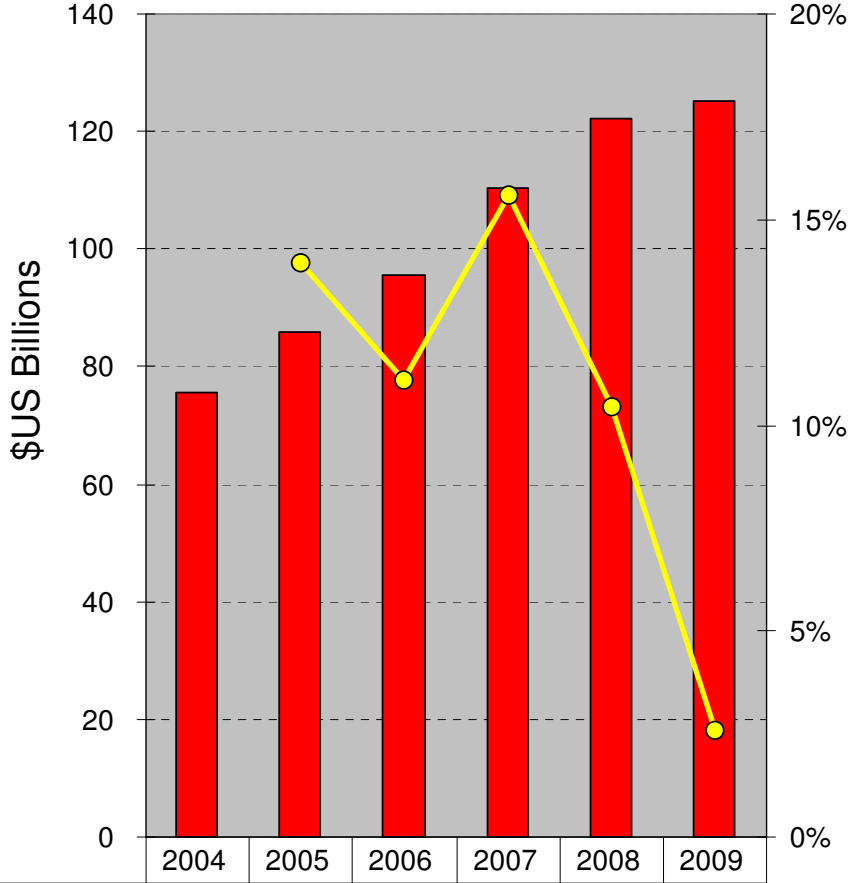
TV Market Forecast

- **Units projected to grow at a 2% CAGR, revenues 11%. Market drivers include flat panel TV demand, lower prices for all TV technologies, national DTV policies, increased HD content, 1080p TVs, rising income levels in China and ROW, etc.**



	2004	2005	2006	2007	2008	2009
Shipments	183.5	187.8	190.9	193.5	199.2	200.9
Growth	5%	2%	2%	1%	3%	1%

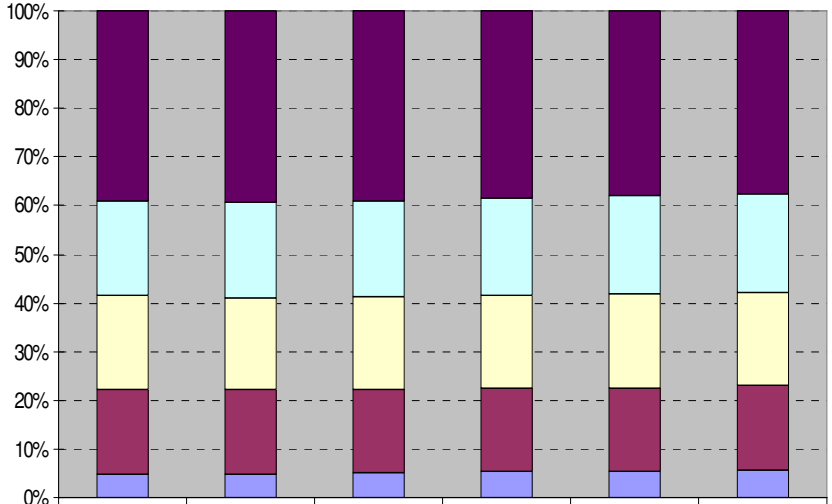


	2004	2005	2006	2007	2008	2009
Revenues	$75	$86	$96	$110	$122	$125
Growth		14%	11%	16%	10%	3%

TV Market - Regional Shipments

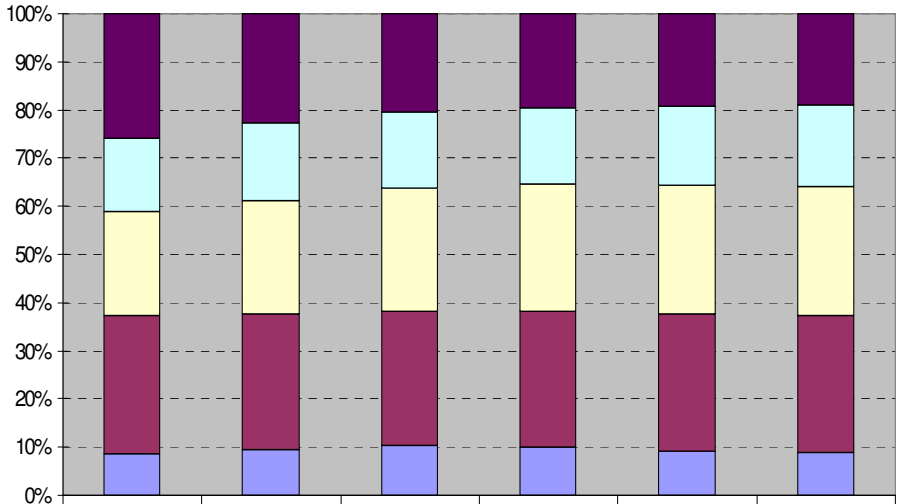
- **North America units projected to grow at a 2% CAGR, revenues 10%. Market drivers include flat panel TV demand, lower prices for all TV technologies, national DTV policies, increased HD content, and 1080p TVs.**

Units



	2004	2005	2006	2007	2008	2009
ROW	38.9%	39.3%	39.0%	38.3%	37.9%	37.6%
China	19.4%	19.8%	19.7%	20.1%	20.3%	20.1%
Europe	19.6%	18.6%	18.9%	19.0%	19.3%	19.1%
North America	17.2%	17.4%	17.2%	17.1%	17.1%	17.5%
Japan	4.9%	4.9%	5.2%	5.4%	5.5%	5.7%

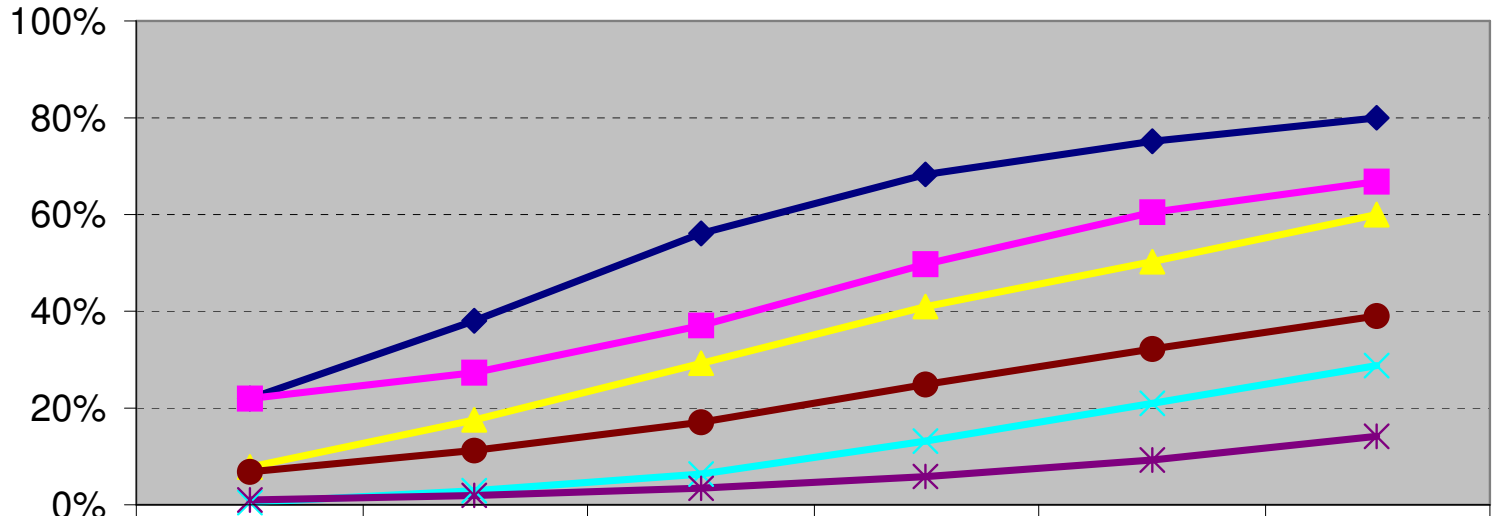
Revenues



	2004	2005	2006	2007	2008	2009
ROW	26.0%	22.8%	20.5%	19.5%	19.2%	19.0%
China	15.1%	16.0%	15.8%	16.0%	16.5%	17.1%
Europe	21.5%	23.7%	25.5%	26.3%	26.6%	26.6%
North America	28.8%	28.1%	27.8%	28.3%	28.5%	28.5%
Japan	8.7%	9.4%	10.3%	10.0%	9.2%	8.9%

HD Penetration Forecast by Region

- **Flat panel growth to drive HD adoption worldwide. Japan TV shipments expected to be majority HD n 2006, NA in 2007 and Europe in 2008. HDTV shipments expected to rise at a 44% CAGR from 12.8M in 2004 to 78.0M units in 2009.**



	2004	2005	2006	2007	2008	2009
Japan	22%	38%	56%	68%	75%	80%
NA	22%	27%	37%	50%	61%	67%
Europe	8%	18%	29%	41%	50%	60%
China	1%	3%	6%	13%	21%	29%
ROW	1%	2%	3%	6%	9%	14%
Total	7%	11%	17%	25%	32%	39%

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Summary

- New technology (ex:1080p), Government mandates, broadcast HDTV content, Blue Laser platforms, new game platforms, lower prices, and consumer education will continue to help drive sales of digital television.
- Flat panel TVs are driving the global TV and HDTV market which is expected to enjoy 11% revenue CAGR to $125B in 2009. The flat panel TV share is expected to reach 45% on a unit basis and 82% on a revenue basis by the end of the forecast.
- Global HDTV shipments are expected to grow at a 44% CAGR to 78M units and a 39% share of the 2009 TV market!

THANK YOU!

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